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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,950	07/03/2003	Alexis Tzannes	5550-31	5413
62574	7590	08/14/2007		
SHERIDAN ROSS P C SUITE 1200 1560 BROADWAY DENVER, CO 80202			EXAMINER ROSARIO, DENNIS	
			ART UNIT 2624	PAPER NUMBER
			MAIL DATE 08/14/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/611,950	TZANNES ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dennis Rosario	2624	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 July 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-91 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-91 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Response to Amendment***

1. The amendment was received on 7/13/07. Claims 1-91 are pending.

***Claim Rejections - 35 USC § 101***

2. The rejection of claims 73-91 is maintained for the same reasons as the office action of 3/28/07.

***Claim Rejections - 35 USC § 112***

3. Due to the amendment, the rejection of claims 55-71 is withdrawn.

***Response to Arguments***

4. Applicant's arguments filed 7/13/07 have been fully considered but they are not persuasive and states:

"The independent Claims have been amended to recite that one or more parameters are iteratively adapted and they include at least one truncation parameter. Neither Lubin nor Mukherjee teach...this feature."

The examiner respectfully disagrees since Lubin discloses one or more parameters ("parameters" in col. 9, line 3) are iteratively adapted ("iterative...adaptation" in col. 9, lines 1-3) and they include at least one truncation parameter ("reduce the...error" in col. 9, line 3). Thus, the parameters are adaptively iterated to reduce errors; and

Mukherjee discloses one or more parameters (or target block size in fig. 2:S1 as

determined upon the output of fig. 1,num. 21) are iteratively adapted (in fig. 2:S2 that is described in the context of "iterations" in col. 5, line 11 wherein the iterations are used to "adjust" in col. 2, line 58 or adapt the target block size or "target memory" in col. 2, line 58 as shown in fig. 1,num. 21:ACCUMULATOR) and they include at least one truncation parameter (or a truncation decision step, fig. 4:S23, that determines whether to use truncation coding, BTC-VQ.)

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-5,8,12-14,17-24,26,30-32,35-41,44,48-50,53-59,62,66-68,71-77,80,84-86 and 89-91 are rejected under 35 U.S.C. 102(b) as being anticipated by Lubin et al. (US Patent 6,075,884).

Regarding claim 19, Lubin discloses an image compression method comprising:

- a) receiving a first image (upon the input of fig. 4, num. 115) in a sequence of images and
- b) compressing (via fig. 4, num. 115) the image at least based on one or more parameters (fig. 4,num. 412); and
- b) iteratively adapting (via fig. 4, num. 112) the one or more parameters used on the first image for compression of a next image, wherein the one or more parameters include at least one truncation parameter (see paragraph 4, above).

Claims 20 and 21 are rejected the same as claim 19b). Thus, argument similar to that presented above for claim 19b) is equally applicable to claims 20 and 21.

Regarding claim 22, Lubin discloses the method of claim 21, wherein the metric is at least based on one of image file size and image quality (since figure 4 is called QME which stands for quality-metric-based encoding.).

Regarding claim 23, Lubin discloses the method of claim 22, wherein the metric governing image quality is based on one or more of:

- a) peak signal to noise ratio,
- b) mean squared error,
- c) human visual system models and
- d) operator inspection (or “human viewer” in col. 7, line 34).

A rejection of claim 24 is moot based on the “one of” limitation in claim 22.

Regarding claim 26 Lubin discloses the method of claim 21, wherein the metric is based on a difference (or “differences” in col. 5, line 20) between a target image quality (“predicted ratings” in col. 5, line 20) and an achieved image quality (“ratings observed” in col. 5, line 20 where said ratings includes “quality levels” in col. 5, line 24) .

Regarding claim 30, Lubin discloses the method of claim 19, wherein the first image and the next image are one or more of:

- a) a sequence of images (or ORIGINAL VIDEO as shown in fig. 4),
- b) time-series data, and
- c) 3-dimensional data sets.

Regarding claim 31, Lubin discloses the method of claim 19, further comprising:

- a) iteratively (“iterations” in col. 7, line 44) controlling the one or more parameters.

Claim 32 is rejected the same as claim 31. Thus, argument similar to that presented above for claim 31 is equally applicable to claim 32.

Regarding claim 35, Lubin discloses the method of claim 19, further comprising:

- a) selecting a quantization (“selection of a quantization” in col. 9, line 52).

Claims 1-5,8,12-14,17,18 are rejected the same as claims 19-23,26,30-32 and 35,19. Thus, argument similar to that presented above for claims 19-23,26,30-32 and 35,19 of a method is equally applicable to claims 1-5,8,12-14,17,18 of a system.

Claims 36-41,44,48-50,53,54 are rejected the same as claims 19,19-23,26,30-32 and 35,19. Thus, argument similar to that presented above for claims 19,19-23,26,30-32 and 35,19 of a system is equally applicable to claims 36-41,44,48-50,53,54 of a system.

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Claims 55-59,62,66-68,71-72 are rejected the same as claims 19-23,26,30-32 and 35,19. Thus, argument similar to that presented above for claims 19-23,26,30-32 and 35,19 of a system is equally applicable to claims 55-59,62,66-68,71-72 of a protocol.

Claims 73-77,80,84-86,89,90,91 are rejected the same as claims 19-23,26,30-32 and 35,19,19. Thus, argument similar to that presented above for claims 19-23,26,30-32 and 35,19,19 of a system is equally applicable to claims 73-77,80,84-86,89,90,91 of a media.

7. Claims 1,7,9,-11,15,16,18,19,21,25,27-29,33,34,36,37,43,45-47, 51, 52, 54, 55, 57,61,63-65,69,70,72,73,75,79,81-83,87,88,90 and 91 are rejected under 35 U.S.C. 102(e) as being anticipated by Mukherjee (US Patent 7,003,167 B2).

Regarding claim 19, Mukherjee discloses an image compression method comprising:

- a) receiving a first image in a sequence of images (fig. 2,num. S3) and
- b) compressing the image (fig. 2,num. S6) at least based on one or more parameters (from fig. 2,num. S7 and S8); and
- b) iteratively adapting (via "adaptive image compression" in col. 3, line 50) the one or more parameters (CONTENT via fig. 2,num. S4) used on the first image for compression of a next image (fig. 2, num. S3), wherein the one or more parameters include at least one truncation parameter (see paragraph 4, above).

Regarding claim 21, Mukherjee discloses the method of claim 19, wherein the compression parameter module adapts the one or more parameters based on a metric (or "in-progress measure" in col. 2, line 56).

Regarding claim 25, Mukherjee discloses the method of claim 21, wherein the metric is based on a difference between a target image file size and an achieved image file size ("difference between the determined com-pressed block size and the target block size" in col. 5, lines 64,65).



Regarding claim 27, Mukherjee discloses the method of claim 19, wherein the one or more parameters includes one or more:

a) quantization parameters (or “BTC-VQ” in col. 4, line 40 that is a function of truncation and quantization).

Claims 28,29,33 and 34 are rejected the same as claim 27b). Thus, argument similar to that presented above for claim 27b) is equally applicable to claims 28,29,33 and 34.

Claim 36 is rejected the same as claim 19. Thus, argument similar to that presented above for claim 19 is equally applicable to claim 36.

Claims 1,7,9-11,15,16,18 are rejected the same as claims 19,25,27-29,33,34,19. Thus, argument similar to that presented above for claims 19,25,27-29,33,34,19 of a system is equally applicable to claims 1,7,9-11,15,16,18 of a method.

Claims 37,39,43,45-47,51,52,54 are rejected the same as claims 19,25,27-29,33,34,19. Thus, argument similar to that presented above for claims 19,25,27-29,33,34,19 of a system is equally applicable to claims 37,39,43,45-47,51,52,54 of a system.

Claims 55,57,61,63-65,69,70,72 are rejected the same as claims 19,25,27-29,33,34,19. Thus, argument similar to that presented above for claims 19,25,27-29,33,34,19 of a system is equally applicable to claims 55,57,61,63-65,69,70,72 of a protocol.

Claims 73,75,79,81-83,87,88,90,91 are rejected the same as claims 19,25,27-29,33,34,19. Thus, argument similar to that presented above for claims 19,25,27-

29,33,34,19 of a system is equally applicable to claims 73,75,79,81-83,87,88,90,91 of a media.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Koshi et al. (US Patent 5,414,527) is pertinent as teaching a method of an adaptive truncation encoder as shown in fig. 8,num. 30.

Gonzales et al. (US Patent 5,301,242) is pertinent as teaching a method of a coefficient with truncation "parameter k" in col. 5, line 34 which are characteristics of quantization.

He et al. (cited ACM article: Low Power Motion Estimation Design Using Adaptive Pixel Truncation) is pertinent as teaching a method of truncation.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario whose telephone number is (571) 272-7397. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
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